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**REMARKS**

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In the Office Action mailed on June 27, 2007, all claims have been rejected as anticipated or obvious over U.S. Patent No. 6,775,247 to *Shaffer* ("*Shaffer*") (obviousness rejections combine other references with *Shaffer*). Claims have been amended herein to more clearly describe embodiments of the present invention as compared to the disclosure of *Shaffer* and other cited references. As amended, all claims are allowable over *Shaffer* and all other cited references.

**A.     UNLIKE THE PRESENT CLAIMS, *SHAFFER* RELIES ON SUPPRESSION**

Before discussing amendments to the claims in detail, brief discussion of *Shaffer* will be useful to highlight some of the important differences between its disclosure and the above claimed invention embodiments. *Shaffer* discloses a method of reducing processing and bandwidth during a videoconference through steps of *suppressing* video communications from users: "The (MCU) then commands the subordinate communication units to *suppress* a video portion of their respective signals, such that the digital signal processing analysis by the multimedia conference unit required to support the multipoint conference is reduced and network bandwidth used is minimized." Abstract (emphasis added).

Generally, *Shaffer* teaches that one conference participant is "dominant" and all others are "subordinate," with subordinate participants suppressing video signals: "In response to the dialing in of the dominant client A, the MCU 102 sends H.323 commands to clients B, C, and D to stop sending video signals. ... The transmission of video packets from subordinate PCS's 110-114 over the links 126-130 via LAN hub 106 to MCU 102 is thus suppressed. In this way, only link 124 is used to send video packets ('Video A' in FIG. 2) from the dominant PCS 108 to the MCU 102. Thus, the present invention reduces the video streams from all of the PCS's to MCU 102 down to one video stream only from the dominant PCS. Col. 5, lines 17-24." Col. 5, lines 11-24 (referring to Fig. 2). As best understood, in *Shaffer*'s embodiments the dominant client is

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generally whoever is speaking so that all subordinate clients view only the current speaker during a videoconference.[1]

As explained in detail below, these teachings are very different from the claimed embodiments and several steps that are required by the claims are not disclosed or suggested.


### B.    *SHAFFER* FAILS TO DISCLOSE REQUIREMENT OF ALL INDEPENDENT CLAIMS

Importantly, all independent claims have been amended to more clearly require each standard user to communicate video data to all other standard users. The claims make clear that unlike *Shaffer* the claimed embodiments do not rely on Suppression. In all independent claims each of the plurality of standard users is receiving a plurality of video data streams – one from each of the other plurality of standard users. Also, each independent claim further requires that the primary video data stream be communicated to the primary user at the same time that each standard user continues to receive video data from all other standard users. These steps are not disclosed or suggested by *Shaffer*.

In all embodiments, *Shaffer* teaches that each client receive only a single video data stream (not a stream from each of the other clients). See, Figs. 3-4. Further, *Shaffer* teaches that the MCU 102 commands subordinate users to suppress communication of video data. Col. 5, lines 17-24 (referring to Fig. 2). Once suppressed, it is impossible for these clients to communicate video data to all other standard users as is required by all independent claims. *Shaffer* therefore fails to disclose a step required by all independent claims, and the claims are allowable.

Additionally, with respect to independent claims 20 and 26 that are rejected as obvious over *Shaffer*, it is submitted that the reference teaches away from the claims since *Shaffer's* step of suppressing video communications from subordinate users is

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[1] Some embodiments of *Shaffer* appear to disclose some minor variations on this. See, for example, *Shaffer's* Fig. 3B and corresponding discussion.

contrary to the requirements of the claims that all standard users communicate video to all other standard users.

## C.    INDEPENDENT CLAIMS ARE ALLOWABLE FOR OTHER REASONS

Independent claims 1 and 21 stand rejected as anticipated by *Shaffer*, and independent claims 20 and 26 as obvious over *Shaffer* in view of U.S. Patent No. 7,151,762 to *Ho* ("*Ho*"). As discussed above, each of independent claims 1, 20, 21 and 26 have been amended to more clearly reflect that all standard users communicate video data to all other standard users. As a result, each standard user receives a plurality of video data streams – one from each of a plurality of other standard users. The suppression based methods taught by *Shaffer* fail to disclose or suggest this, and in fact teach away from the claimed requirements. These claims are therefore allowable.

As discussed below, these independent claims are also allowable for other reasons.

## C.1    *SHAFFER* FAILS TO DISCLOSE THE BANDWIDTH LIMITATIONS OF CLAIMS 1, 20, 21 AND 26

Claim 1 has been amended to generally include the limitations of claim 2 (which has been cancelled) that relate to bandwidth required for communication with the primary user and with the standard users, and claims 21 and 26 have been amended to require similar steps. In particular, claim 1 recites that communication of the primary video stream to the at least one primary meeting attendee requires substantially less bandwidth than does communication of the plurality of video streams to each of the standard users. Likewise, amended claim 21 recites that communication of the primary subset to the one or more primary users requires substantially less bandwidth than communication of the plurality of real-time data streams to each of the standard users. Amended claim 26 recites that communication of the primary stream to the primary attendee requires substantially less bandwidth than does communication of the plurality of real time data streams to each of said standard attendees. Claim 20 requires that the

standard users be communicating with the network using a higher capacity bandwidth connection than the at least one primary user.

These limitations relate to one of the important benefits of some embodiments of the present invention that is not achieved by *Shaffer*: a primary user with limited bandwidth capacity can participate in a virtual meeting with standard users that have greater bandwidth capacity. See, e.g., Specification, p. 9, lines 6-17. *Shaffer* fails to teach these required elements of claims 1, 21 and 26, and instead (as best understood) teaches that communications between the network and each client (both dominant and subordinate) require the same bandwidth since each client receives only one video stream and an identical audio stream.

The Office Action cited an "aggregation" of *Shaffer's* subordinate users in comparison to *Shaffer's* single dominant user to reject a similar limitation in original claim 2. It is submitted that such an aggregation cannot satisfy the language of claims 1, 21 and 26 which have been clarified as compared to the original claim 2.

Also, such aggregation cannot properly be relied on to anticipate the language of claim 20. Claim 20 requires that each of the standard users be connected to the network via a connection with a first bandwidth capacity and each of the at least one primary users to be connected via a connection with a lower capacity. It is submitted that *Shaffer* cannot satisfy this required element since (as best understood) each of *Shaffer's* clients receive communications of equal bandwidth.

## C.2    *SHAFFER* FAILS TO DISCLOSE CLAIM 20'S PRIMARY AUDIO DATA

Claim 20 requires, among other elements, receiving at least one *audio* data stream from each of a plurality of standard users (in addition to video data streams). Claim 20 further requires identifying at least one primary audio data stream (in addition to at least one primary video stream) from all of the audio streams being communicated from the standard users, and that only the primary audio (together with primary video) be communicated to at least one primary user while each of the standard users continue to communicate video and audio data streams to all others of the standard users. Put

another way, claim 20 requires that standard users receive video and audio data from all other standard users, while a primary user receive only a primary video data signal and a primary audio data signal.

The Office Action cites *Shaffer* for disclosure of this required step of identifying a primary audio signal and communicating only this signal to the primary user while all standard users continue to receive all audio from all other standard users. It is submitted, however, that *Shaffer* fails to disclose or suggest this and in fact teaches away from it.

*Shaffer* teaches that the audio stream should **not** be modified (with the result that the audio stream sent to both dominant and subordinate users are identical): "The audio transmissions normally used for the audio-video conference *are not changed* with the present invention..." (col. 5, lines23-24); "In all embodiments the *audio stream remains unchanged...*" (col. 6, line 64) (emphasis added in both quotations).

This is another basis for the allowability of claim 20.


## C.3    CLAIMS 20 AND 26 ARE ALLOWABLE OVER HO

Although further discussion of the allowability of claims 20 and 26 is moot given the above noted shortcomings of *Shaffer*, for the sake of thoroughness the *Ho* reference will be considered. Each of claims 20 and 26 generally require that data streams include an identifier and require steps of using that identifier to determine the primary stream(s). The Office Action admits that these limitations are not present in *Shaffer*, but cites *Ho* as disclosing this. It is submitted that this is not correct.

Based on the citation to *Ho* in the Office Action (Col. 5, lines 9-17) it is assumed that the Office Action is citing *Ho's* "VSID" or "virtual stream identifier" as satisfying the claimed "identifier" (confirmation is requested). *Ho's* VSID, however, cannot meet the requirements of the claimed identifier. *Ho's* disclosure is limited to identifiers used only with "virtual streams" (not with audio or video streams) in a basic service set (BSS) in a wireless local area network (WLAN). Col. 2, lines 43-45.

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Importantly, *Ho* teaches that its VSID attaches to a virtual stream that: "...exists solely within the medium access control sublayer of the WLAN." Col. 2, lines 45-47.

Accordingly, the teaching of *Ho* cannot satisfy the requirements of claims 1, 20 or 26 that require video data streams to have a unique identifier, and for that identifier to be used to identify a primary data video stream. This is an additional basis for the allowability of claims 1, 21 and 26.

## D. DEPENDENT CLAIMS 3, 5, 8, 10, 11 AND 15 ARE ALLOWABLE FOR OTHER REASONS

All of the pending dependent claims are allowable for the same reasons as are the independent claims that they depend from. Several of the dependent claims are allowable for other reasons as well since they recite additional limitations not disclosed or suggested by any of the cited references.

Claim 3, for example, stands rejected over *Shaffer* in view of *Ho*. As discussed above in relation to other claims, it is submitted that the recitations of claim 3 related to use of an identifier with a video data stream are not disclosed by *Ho*. As discussed above, *Ho's* VSID cannot meet the requirements of the identifier claimed in claim 3. *Ho's* disclosure is limited to identifiers used only with "virtual streams" (not with video streams) in a basic service set (BSS) in a wireless local area network (WLAN) that "...exists solely within the medium access control sublayer of the WLAN." Col. 2, lines 43-47. This is another basis for the allowability of claim 3.

Claim 5 is also allowable for other reasons in addition to the allowability of claim 1. Claim 5 recites that a first network interface is used to communicate video data streams between each of the standard users while a second network interface is used to communicate the primary data stream to the primary user. Put another way, claim 5 requires two network interfaces be simultaneously communicating video data: a first network interface for the standard users and a second interface for the primary user. As best understood, *Shaffer* fails to disclose this.

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Claim 8 requires, among other elements, that a primary audio data stream be identified from the plurality of audio data streams coming from the standard users, and that this primary audio stream be communicated to the primary user together with the primary video stream while all of the standard users continue to receive all of the video and audio data streams from all other standard users. Claim 8 therefore requires selectively communicating one of the many audio streams from the standard users to the primary user.

As discussed above, *Shaffer* fails to disclose this required element, and instead states: "The audio transmissions normally used for the audio-video conference *are not changed* with the present invention..." (col. 5, lines23-24); "In all embodiments the *audio stream remains unchanged...*" (col. 6, line 64) (emphasis added in both quotes). Claim 8 is therefore allowable.

Claim 10 depends from claim 1 and further requires that the network interface include a first port over which the standard users communicate video data and a second primary port over which the primary user communicated primary video data. Communication of the primary stream occurs at the same time that standard users continue to receive all video streams from all other users. The suppression based systems and methods of *Shaffer* fail to disclose or suggest this.

As discussed above, *Shaffer* fails to disclose standard users receiving video data from all other users. *Shaffer* further fails to disclose using a primary port to communicate with a primary user while standard users communicate with a second port. In the methods and systems of *Shaffer* that rely on suppression, as best understood, there is no need for a first port for standard users and a second primary port for a primary user since video transmissions from subordinate clients are suppressed. Claim 10 is therefore allowable.

Claim 11 depends from claim 1 and further requires that the at least one primary video data stream be two different primary video data streams. One each of the two primary streams are sent to one each of two different primary users. *Shaffer* fails to disclose this.

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Claim 15 depends from claim 1 and further requires steps of receiving a video data stream from the primary user and communicating this video data stream to each of the standard users whereby each of the standard users receives a video data stream from all others of the standard users in addition to a video data stream from the primary user. *Shaffer* fails to disclose or suggest this, and instead teaches that each client, both dominant and subordinate, receive only one video data stream. See, Figs. 3-4. *Shaffer*, in fact, appears to teach away from this limitation since he teaches that a goal of his method is to reduce required bandwidth between the network and clients. Col. 7, lines 5-7. Accordingly, the requirement of claim 15 is contrary to the teachings of *Shaffer*. Claim 15 is therefore allowable.

## E. NEW CLAIMS 27 - 32 ARE ALLOWABLE

New dependent claims 27-32 have been presented for consideration and are believed to be allowable.

Claim 27 depends from claim 1 and further requires that a list be provided to the at least one primary user. The list identifies each of the plurality of video data streams being communicated between the standard users. Claim 27 further requires that the primary user can select the one or more streams from the list for viewing as the primary data stream. *Shaffer* fails to disclose this, and instead teaches that the dominant client is selected based on monitoring of audio data (e.g., whoever is speaking is dominant) (col. 6, lines 40 - 55), setting the first caller as dominant (col. 7, lines 18-20), or allowing for self identification (col. 7, lines 31-32).

Claim 28 depends from claim 27 and further requires that the list include video images from each of the plurality of video data streams. Claim 29 depends from claim 27 and further requires that the list include thumbnail images from each of the plurality of video data streams. *Shaffer* fails to disclose these required elements.

New claims 30 and 31 depend from claim 20. Claim 30 requires that substantially less bandwidth be required to communicate with the primary user as compared to the standard users. New claim 31 requires communicating a list including

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video images to the primary user for selection of the primary stream. As discussed above, these limitations are not disclosed by any of the cited references.

Finally, new claim 32 depends from claim 21 and further requires communication of a list including thumbnail images of the video data images to the primary user whereby the primary subset may be selected from the list.

## F.   OTHER AMENDMENTS

Amendments to the specification have been made herein above to correct typographical errors. Also, amendments to various claims have been made to correct typographical errors, to clarify language and aspects of invention embodiments, and to reflect changes in underlying independent claims. These amendments are not directed to patentability.
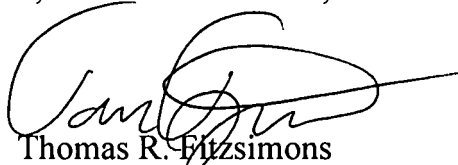
## G.   CONCLUSION

It is submitted that all claims in their current form are allowable. Timely consideration and allowance is respectfully requested. Should there be any questions suitable for a phone conference, the undersigned attorney requests the favor of a phone conference to discuss the same.

Respectfully submitted,

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